

OLDEST BEE PAPER
IN AMERICA

THE WEEKLY BEE JOURNAL

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Advertisements for the next Weekly BEE JOURNAL must reach this office by the Saturday of the previous week.

Books for Bee-Keepers.—For prices and descriptions of bee-books, see the second page of this paper.

All Papers are Stopped at the expiration of the time paid for, unless requested to be continued.

When writing to this office on Business, correspondents must not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either part of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They both may be sent in one envelope, but on separate pieces of paper.

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 923 & 925 WEST MADISON STREET,
 CHICAGO, ILLINOIS.

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Honey as Food and Medicine, by THOMAS G. NEWMAN.—It gives the various uses of Honey as Food; recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc. Also, Honey as Medicine, with many valuable recipes. It is intended for consumers, and should be liberally scattered to help in creating a demand for honey. Price, for either the English or German edition, 5 cents—one dozen, 40 cents—100 for \$2.50—500 for \$10.00—1,000 for \$15.00.—If 100 or more are ordered, we will print the bee-keeper's card (free of cost) on the cover.

Bee-Keepers' Convention Hand Book, by THOMAS G. NEWMAN.—It contains a simple Manual of Parliamentary Law and Rules of Order for the guidance of officers and members of Local Conventions—Model Constitution and By-Laws for a Local Society—Programme for a Convention, with Subjects for discussion—List of Premiums for Fairs, etc. Bound in cloth, and suitable for the pocket. Price, 50 cents. Leather 60 cents.

Why Eat Honey? by THOMAS G. NEWMAN.—This Leaflet is intended for distribution in the Bee-Keeper's own locality, in order to create a Local Market. Price, 50 cents per 100; 500 copies for \$2.25; 1,000 copies for \$4.00. When 200 or more are ordered at one time, we print on them the honey-producer's name and address FREE.

Preparation of Honey for the Market, including the production and care of both Comb and Extracted Honey, and Instructions on the Exhibition of Bees and Honey at Fairs, etc., by THOMAS G. NEWMAN. A chapter from "Bees and Honey."—10 cts.

Swarming, Dividing and Feeding Bees.—Hints to Beginners, by T. G. NEWMAN. A chapter from "Bees and Honey." Price 5c.

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Bee-Keepers' Guide, or Manual of the Apiary, by PROF. A. J. COOK.—It is elegantly illustrated, and fully up with the times on every subject that interests the bee-keeper. It is not only instructive, but interesting and thoroughly practical. It comprises a full delineation of the anatomy and physiology of Bees. Price, \$1.25.

Quinby's New Bee-Keeping, by L. C. ROOT.—Its style is plain and forcible, making its readers realize the fact that the author is master of the subject. Price, \$1.50.

A B C of Bee-Culture, by A. I. ROOT.—Embraces everything pertaining to the care of the Honey-Bee, and is valuable to the more advanced bee-keeper, as well as the beginner. Cloth, \$1.25; paper, \$1.

Blessed Bees, by JOHN ALLEN.—A romance of bee-keeping, full of practical information and enthusiasm. Price, 75c.

The Hive and Honey-Bee, by REV. L. L. LANGSTROTH.—The work of a master, and will always remain a standard.—Price \$2.00.

Dzierzon's Rational Bee-Keeping.—A translation of the master-piece of that most celebrated German authority. Price, bound in cloth, \$2.00; in paper covers, \$1.50.

Bee-Keepers' Handy-Book, by HENRY ALLEY.—This book contains 270 pages, and is a complete Manual of Bee-Keeping. Price, \$1.50.

Bee-Keepers' Text Book, by A. J. KING.—Revised and enlarged. Price, \$1.00.

Extracted Honey; Harvesting, Handling and Marketing.—By CHAS. DADANT & SON.—Details their management. Price, 15c.

Practical Hints to Bee-Keepers, by CHAS. F. MUTH.—Gives his views on the management of bees. Price, 10c.

Dzierzon Theory.—The fundamental principles of Dzierzon's system of apiculture as set forth by Berlepsch. It was translated by the late Samuel Wagner. Price, 15c.

Dictionary of Practical Apiculture, by PROF. JOHN PHIN.—This gives the correct meaning of nearly 500 apicultural terms. Price, bound in cloth, 50c.

The Hive I Use, by G. M. DOOLITTLE.—Details his management of bees. Price 5c.

Foul Brood, by A. R. KOHNKE.—Its origin and cure. Price, 25c.

Moore's Universal Assistant, and Complete Mechanic.—Contains over 1,000,000 industrial facts, calculations, processes, trade secrets, legal items, business forms, etc. Price, \$2.50.

Kendall's Horse Book.—No book can be more useful to horse owners. It has 35 engravings, illustrating positions of sick horses, and treats all diseases in a plain and comprehensive manner. It has many good recipes, etc. Price, 25c., in either English or German.

Food Adulteration.—What we eat and what we should not eat. Price, 50c.

Scribner's Lumber and Log Book.—Gives measurement of all kinds of lumber, logs and planks; wages, rent, etc. Price, 35c.

Fisher's Grain Tables.—For casting up the price of grain, produce and hay; wood measurer, ready reckoner, tables for plowing, etc. Price, 40c.

Hand-Book of Health, by Dr. Foote. Rules for eating, drinking, sleeping, bathing, working, dressing, etc. Price, 25c.

Constitution and By-Laws, for local Associations, \$2 per 100. The name of the Association printed in the blanks 50c. extra.

Emerson Binders, made especially for the BEE JOURNAL, and lettered in gold on the back. Price, for the Weekly or Monthly, 75 cents each. They cannot be sent by mail to Canada.

Photographs of Rev. L. L. Langstroth, Baron of Berlepsch, or Dzierzon, 25 c. each.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, 10c. each, or \$5 per 100. Large and elegant ones, with rosette, 50 cents, post-paid, 10 cents.

Poulterer's Guide, for treating diseases of Poultry, etc., by C. J. WARD. Price 25c.

How to Propagate and Grow Fruit, by Charles A. Green, contains over 50 illustrations and two colored fruit plates. It contains 64 pages. Price, 25 cents.

Previous to the publication of this book, there was no work on the propagation of small and large fruits which could be purchased for less than \$3.00, therefore the masses have been without a guide in this important branch of fruit-growing, and know very little about propagating. The price of the book places it within the reach of all. Further than this, the book gives the latest and most approved methods found in no other publication.

This book tells HOW TO PROPAGATE Straw-berries, black raspberries, red raspberries, blackberries, currants, gooseberries, grapes, quince, peach, apricot, plum, cherry, pear and apple; also GENERAL RULES for propagation, with illustrations showing how to bud, how to graft, how to propagate from layers, stools, inarching, with full instructions for grafting the grape. It tells how to lay out a garden or fruit farm—how to plant, cultivate, trim, etc.

The A B C of Carp Culture, is a neat pamphlet of about 100 pages. It explains the simplest, cheapest and most effective system of carp culture, and being written by Mr. Milton P. Pierce, of Philadelphia, Pa., Secretary of the American Carp Cultural Association, it cannot fail to be of inestimable value to all interested in the "finny tribes." Price, 40 cents.

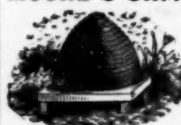
The A B C of Potato Culture; "how to grow them in the largest quantity, and of the finest quality, with the least expenditure of time and labor." The book is not only a valuable one to potato-growers, but a great part of it applies to the management of almost any crop on the farm, especially to the preparation of the soil, manures, etc. Price, 40 cents.

"Farmer's Account Book," contains 166 pages, printed on writing paper, ruled and bound, and the price is \$3.00. We will club it and the Weekly BEE JOURNAL for a year for \$4.00. If you have already sent us \$2.00 for the Weekly BEE JOURNAL for a year, we will send the Book for another \$2.00, making \$4.00 in all. If you want it sent by mail, add 20 cents for postage.

Phenol for the Cure of Foul Brood.—By Prof. Frank R. Cheshire, of London, England. Price 10 cents; 32 pages.

A \$5.00 BOOK FOR \$2.50.

MOORE'S UNIVERSAL ASSISTANT



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THOS. G. NEWMAN & SON,
 923 & 925 West Madison Street, CHICAGO, ILL.

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We supply the American Bee Journal one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both.	Club
The Weekly Bee Journal	2.00	..
and Gleanings in Bee-Culture	3.00	2.75
Bee-Keepers' Magazine	3.00	2.75
Bee-Keepers' Guide	2.50	2.35
Kansas Bee-Keeper	3.00	2.75
The Apiculturist	3.00	2.90
Canadian Bee-Paper	3.00	2.75
The 7 above-named papers	7.50	6.75

THOS. G. NEWMAN & SON,
 923 & 925 West Madison Street, CHICAGO, ILL.

WEEKLY EDITION

OF THE

THOMAS G. NEWMAN,
EDITOR.

Vol. XXI. August 5, 1885. No. 31.

APICULTURAL NEWS ITEMS.

EDITORIAL AND SELECTED.

Drones are tolerated in queenless colonies; hence, if you have a colony with superior drones and want to have them fertilize your young queens, make that colony queenless.

Folding Paper Boxes for marketing comb honey, are excellent contrivances. We have just received a circular concerning them, from Mr. George T. Hammond, Brockport, N. Y. They can be obtained so cheaply (about 1½ cents each) that they should come into general use.

Young Bees do not gather honey from the flowers until they are 14 days old. Their duties are to nurse the larvae, clean the cells, build and care for queen-cells, etc. They are not idlers—they are workers, and as soon as they become of *ripe age*, they will take their places in the fields.

Oleomargarine must be so "labeled" in Missouri. The late Legislature passed a law making it a misdemeanor for any hotel, inn, or boarding-house keeper to set before his guests, at any meal, any compound resembling butter, manufactured from cattle fat or beef suet, or any article known as oleomargarine, unless the name shall be clearly and indelibly marked on the dish or plate containing it, with its true name. Why not serve "glucose" in the same way?

Glucose from Rags.—The *Revue Industrielle* states that a German manufactory is turning out over a ton a day of glucose made from old linen rags. "These rags, which are composed of hard vegetable fibers, are treated with sulphuric acid, which converts them into dextrine. The latter product thus obtained, undergoes a washing with milk of lime, and is then treated with a fresh supply of acid stronger than the former, when the mass is at once transformed and crystallizes into glucose, of which confections, honey and jelly may be made. The process is said to be a very cheap one, and the glucose chemically identical with grape-sugar. A strong out-cry, however, has arisen against the manufacture of grape-sugar from rags, and the enterprise is understood to be in danger of being interfered with by the German government."

The Southern Exposition for 1885 will be held at Louisville, Ky., from Aug. 15 to Oct. 24. The foreign exhibits are from 15 different countries, and the American exhibits are from every State and Territory.

Ants can easily be exterminated by putting about two ounces of lard-oil in a small tin can without a top, and burying the can about half way in the earth near the ants' nest; leave it until the next day, and, if any ants are seen outside of the can, pour a little more oil into it—stir it with a stick and let it stand a little longer, when the last ant within travelling distance will be drowned in the oil.

When Marketing Extracted Honey, it is a sad blunder to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

Paste for Labels on Pails, Jars, etc.—A correspondent asks for a good recipe for paste to hold honey-labels on tin or earthenware. Here is one: "Make thin flour paste in the usual way. When nearly cooked, add about one-eighth as much of cheap Porto Rico molasses, and cook for 10 minutes longer, stirring continually to prevent burning. If too thick to work well, it may be diluted with warm water, thoroughly mixed before using."

Mignonette.—A California correspondent, living not far from San Francisco, writes that he has been unable to find any flower that bees work on in greater numbers than they do on a variety of mignonette, which he thinks is Parson's New White. It is a tall-growing kind, and grows in his climate from year to year, and where given space it spreads rapidly, as it propagates itself from seed very readily. He has measured spikes of bloom over two feet long, and as there are numbers of them, it may be easily seen how profuse a bloomer this plant must be. He writes that it will take hold anywhere.

Flowers, of gay tints and exquisite attire, are made to attract the bees by their loveliness, for the purpose of getting the bees to fertilize them. The *Fanciers' Friend* adds its testimony on this point, in this language: "How easy it might have been to have ordained that flowers should fertilize themselves, as many do, without any extraneous intervention; but, by this wise and benevolent ordination, a tribe of sensitive creatures is introduced, to be perpetuated by the perpetuation they supply to that which supports them, and in this circle of reciprocal good offices, lend an additional charm to the genial seasons, by the animation which they give to the face of nature, in embellishing the plants they visit with their vivacity and plants."

Surely creative wisdom is ever glorified by her offspring. She spreads a "table of plenty" before the bees, enticing them to it by billions of resplendent blossoms, exquisitely perfumed by the balm of thousands of sweet-scented flowers, while they in turn, present their thank-offering in the "merry hum" of their supernal "matin-song."

Bee-Keepers' National Union.—The voting for officers under the Constitution, for the coming year, was closed on Aug. 1st, and resulted in the election of the following persons:

President—James Heddon.

Five Vice-Presidents—G. M. Doolittle,
G. W. Demaree, A. I. Root,
Prof. A. J. Cook, Dr. C. C. Miller,

Manager, Sec'y & Treas.—T. G. Newman.

The details were as follows on the vote for President: James Heddon 60, A. I. Root 38, Prof. A. J. Cook 8, Thomas G. Newman 6, G. M. Doolittle 2, Dr. C. C. Miller 2, J. E. Pond, Jr. 2, Alfred H. Newman 1, Rev. W. F. Clarke 1.

For Vice-Presidents: G. M. Doolittle 77, G. W. Demaree 63, Prof. A. J. Cook 61, Dr. C. C. Miller 62, A. I. Root 59, S. M. Locke 45, A. J. King 44, H. Seovell 38, A. G. Hill 33, James Heddon 33, Chas. Dadant 16, W. Z. Hutchinson 7, A. H. Newman 5, C. F. Muth 5, Dr. G. L. Tinker 5, S. I. Freeborn 4, E. M. Hayhurst 3, C. P. Dadant 3, Wm. Muth-Rasmussen 2, Rev. L. L. Langstroth 2, Paul L. Viallon 2, O. O. Poppleton 2, T. G. Newman 2, Geo. Grimm 2, W. H. Stewart 2, Rev. W. F. Clarke 2, J. E. Pond, Jr. 2, Judge W. H. Andrews 2, Dr. H. Besse 1, Mrs. L. Harrison 1, C. Theilmann 1, E. France 1, Rev. O. Clute 1, Arthur Todd 1, Dr. E. B. Southwick 1, Allen Pringle 1, Dr. J. P. H. Brown 1, Christopher Grimm 1, A. A. Baldwin 1, E. A. Gastman 1, H. Alley 1, Barton Forsgard 1, D. A. Jones 1, Chas. H. Green 1, W. H. Shirley 1, L. C. Root 1, J. B. Mason 1.

For Manager, Secretary and Treasurer: Thomas G. Newman 115. Blank 5.

There are about 30 voting blanks that have not been returned, and so these votes are lost—not being here on the 1st day of August. There were no candidates nominated, and hence no one is defeated. The voting was as free as it was possible to be, as is shown by the scattering vote.

All those who are elected have been notified, and the first business (that of selecting proper counsel) has been laid before them for action. Now we are ready to work, and every bee-keeper should at once join the Union and help to supply the funds necessary for defense.

The Cedar Valley Bee-Keepers' Association will hold its annual meeting at the office of Jerry Moser, on Fourth street, east side, Waterloo, Iowa, on Aug. 12, 13 and 14, 1885. All interested in bee-keeping are cordially invited. A. D. BENNETT, Sec.

Owing to a very heavy rain-storm during the forenoon of July 18, the meeting of the Marshall County Bee-Keepers' Association was deferred until Saturday, Aug. 29, 1885, at 10.30 a. m. in the Court House at Marshalltown, Iowa. Subjects: "Fall Management of Bees" and "Care and Sale of Honey." All bee-keepers are invited. It will be a time of rest from other labor, and we hope to have a good meeting.

J. W. SANDERS, Sec.

The third Annual Picnic of the Eastern Iowa and Western Illinois Bee-Keepers' Association, will be held at Black Hawk's Watch Tower, 4 miles south of Rock Island, on Thursday, Aug. 13, 1885. Cars leave Terry Landing, in Rock Island, for the grounds every half hour. A pleasant time is anticipated. Bee-keepers and their friends are cordially invited to attend. We are glad to announce that Mr. I. V. McCagg, President and founder of the Association, is improving, and will shortly again be able to be with us, after an illness of some 60 days, the greater part of the time being confined to his bed with intense suffering from inflammatory rheumatism. He expects to be so much improved as to be able to attend the picnic.

WM. GOOS, Sec.



WITH
REPLIES by Prominent Apiculturists.

Flat-Bottom Foundation.

Query, No. 94.—Will bees change the base of flat-bottom foundation before drawing it out? or after drawing it out will they fill up the corners with wax, or let it remain with a flat base?—Burlington Co., N. J.

G. M. DOOLITTLE says: "My experience says that they change the base in using it, so they must of necessity thin it. This is why I prefer the flat-bottom foundation for sections, for with the natural base, bees often simply add their wax to the foundation, leaving that untouched as far as thinning it is concerned; hence the complaint of 'fish-bone' center."

W. Z. HUTCHINSON answers: "After the flat-bottom foundation is drawn out, the base of the cells will be found shaped like the base of natural comb; how this change is effected, I do not know."

G. W. DEMAREE replies: "I have never used any foundation with 'flat-bottom,' except some thin foundation in section-boxes. With the thin foundation, but little or no alteration was made at the bottom of the cells, so far as I could discover."

J. E. POND, JR., remarks: "I have never used flat-bottom foundation, for the reason that I do not think it is in accordance with the laws governing comb-building. Undoubtedly a thinner base can be formed flat than natural by machinery."

JAMES HEDDON says: "They usually change the base, but by what process I have never experimented carefully enough to know."

PROF. A. J. COOK answers: "I have used but little of this kind of foundation, and have not observed anything relating to the matter."

CHAS. DADANT & SON say: "We have never used flat-bottom foundation, so we will let others speak."

DR. G. L. TINKER replies: "In drawing out both the heavy and the light foundation, the bees manage to get the cells properly shaped at the bottom. It is never left with a flat base."

Drawing out Foundation.

Query, No. 95.—It being conceded that bees fill themselves with honey before they swarm, it must be apparent that if this honey is formed into wax before they are put upon a new stand, this wax is all lost by having them upon full sheets of foundation; if not, what do the bees do with this honey while drawing out the foundation?—H.

JAMES HEDDON answers: "All the honey that bees contain when swarming would make but little wax. Some honey is needed to support them while drawing out the foundation, and any excess can be stored as fast as the foundation is drawn out. Bees, if crowded for room previous to swarm-

ing, often swarm with wax scales, and these are sometimes used to build the tops of the combs beyond the breeding depth. Such scales are not commonly found on many bees that are supplied with proper room before swarming, especially if run for extracted honey."

CHAS. DADANT & SON reply: "We suppose that bees can draw out the foundation while they are full of honey. The proof of it lies in the fact that foundation will be already partly drawn out in less than 2 hours after having an ordinary swarm."

W. Z. HUTCHINSON says: "It is not apparent to me that the honey is formed into wax before the bees are put upon a new stand. Can it not be possible that the honey is retained in the honey-sac until the foundation is sufficiently drawn out to allow the honey to be deposited? I am, this season, having a part of my swarms upon foundation, and a part upon empty frames, hoping thereby to decide which course is advisable."

G. M. DOOLITTLE remarks: "That is exactly what I believe. If foundation is used in the brood-chamber, use only starters in the sections, and they will use their wax there; or if foundation is used in the sections, let them build comb below, *a la* Hutchinson. This item is worth looking after."

PROF. A. J. COOK answers: "This honey is to feed vitality and all vital functions. The strength it gives goes to wax only when wax is needed. If we supply to our bees either foundation or combs, I can hardly find examples to show the wax scales to my class; take away all combs, and soon nearly every bee will show the wax scales. Wax is secreted only when needed, as a usual thing, though confinement and disturbance will also induce its secretion."

DR. G. L. TINKER replies: "According to my observation, bees are unable to make a comb from the ordinary heavy foundation, with full depth of cells, without the addition of more wax. Without using more wax they may draw it out so as to be one-half an inch thick. They go right on secreting wax just the same whether hived on foundation or not."

G. W. DEMAREE says: "Bees, as a general rule, do fill their sacs with honey when they swarm, but there are exceptions to the rule, as I have several times in my experience seen, yea 'felt.' For when they do forget to 'fill up,' you will hear from them and feel them, too, when you set about hiving them. When 'out empty,' they will sting anybody or anything. Bees not only fill their sacs full of honey when they swarm, but they make preparation for comb-building several days in advance of the issuing of the swarm. When foundation is used in the brood-department, if you want to compute the 'loss and gain,' you should charge the expense side of your account with lost honey equal to the cost of the foundation. Thus if your foundation costs 50 cts. per lb., in cash, add the price of

the lost honey (wax) to it, and your foundation, in fact, costs you \$1.00 per lb."

J. E. POND, JR., remarks: "The above question is one that can only be answered theoretically. We know that grass grows, and we know also that it assimilates food in so doing; the why and how we know not. I have seen quite a quantity of comb, or wax, at least, left on the limb of a tree where a swarm had remained only an hour or two after clustering, before being hived. It is fair to suppose that little excess of wax will be found unutilized."

DR. C. C. MILLER says: "Some of the honey may be deposited in the cells. It may all be needed to finish the combs, foundation only making a part."

Eight or Ten Frame Hives?

Query, No. 96.—1. Messrs. Hutchinson and Heddon, on page 398, say that a queen costs almost nothing, but combs and hives do; hence they prefer crowding their queens for room and not get their full laying capacity developed, and save two combs in each hive. I believe that it should be just the other way. Which had these two gentlemen rather take out of a hive at any time in the breeding-season, the queen or two dry combs?

2. Mr. Heddon, on the same page, says: "What is the price or worth of that kind of eggs?" Does he mean that eggs are worthless, or that a hive is just as well off for honey with only 50,000 workers as with 150,000? I believe that the stronger a colony is, the more honey we get, provided we give them room for it.—Critic.

JAMES HEDDON answers: "This is a very important subject, and needs considerable space to clearly show the reason why Adam Grimm, and many other successful honey-producers, changed from 10 to 8 Langstroth frame hives. I will herewith send an article on the subject for the BEE JOURNAL."

W. Z. HUTCHINSON replies: "I can only repeat what I said before—queens cost practically nothing, combs and hives do. I prefer to have my hives of such capacity that an ordinary queen will keep the brood-nest full. I do not wish to run the risk of having a frame or two of dead capital in each of the hives. I do not understand what is meant by the last sentence in the first paragraph."

"One hundred and fifty thousand bees will store as much honey when divided into 3 colonies of 50,000 each, as when united into one colony occupying a hive 3 stories high. I give my strong colonies plenty of room in which to store their honey, but not in the brood-nest."

Convention Notices.

The Western N. Y. and Northern Pa. Bee-Keepers' Association will meet at Salamanca, N. Y., in Odd Fellows' Hall, on Sept. 1 and 2, 1885. A. D. JACOBS, Sec.

The Cortland Union Bee-Keepers' Association will hold a basket picnic at the apiary of Mr. Miles Morton, at Groton, N. Y., on Tuesday, Aug. 18, 1885. All bee-keepers, with their families, are cordially invited to be present. W. H. BEACH, Sec.

The next meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held at Rock City, Ills., on Aug. 25, 1885. J. STEWART, Sec.

CORRESPONDENCE

Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark \odot indicates that the apiarist is located near the centre of the State named: δ north of the centre; γ south; α east; ω west; and this δ northeast; \odot northwest; γ southeast; and γ southwest of the centre of the State mentioned.

For the American Bee Journal.

My Experience with Bee-Poison.

REV. L. L. LANGSTROTH.

In 1838 I put 2 colonies of bees in an attic closet, but I made no experiments of any kind with them; they were simply looked at and admired. In 1859 I fairly began my apiarian career, and I soon found that to experiment much with bees, meant to get many stings; at first these were not only quite painful, but caused severe swellings. I dreaded to be stung the latter part of the week, for often one eye would close and the other nearly so, and to preach in such a condition was by no means a pleasure. If stung on the hand, my whole arm would swell so rapidly that if my coat was not seasonably taken off, it had to be ripped off. In short, I was a regular martyr to the bee-poison.

My second year's experience was much more favorable, and in the course of a few years, I became almost bee-proof. In the pressure of business, and my zeal for studying the habits of the bee, I generally preferred to be stung occasionally, than to lose time by wearing a bee-hat. The pain of a sting was seldom very severe, and not often caused much swelling. My experience was the same with that of most bee-keepers who have persevered in spite of stings, until at last their systems became accustomed to the poison.*

A few facts out of many that might be given: I once agreed to help a farmer to move a hive to a new location. He assured me that the bottom-board was securely fastened. It fell off before we had got more than a few steps with our load—covered with bees, some of which were crushed—and the air at once was filled with the enraged insects. The farmer dropped his side of the hive and ran away; it fell against me, but I held on until I lowered it to the ground; and then made the best of my way into the house. Perhaps a hundred or more stings were pulled out of my face and head! and yet in a few hours one could hardly have noticed that I had

been stung at all. When visiting that great man, Dr. Jared P. Kirtland, of Cleveland, Ohio, he wished me to examine with him a colony of bastard (hybrid) bees. The Doctor was armed with bee-hat and gloves—both of which I declined to use. We quieted them pretty well with smoke, when he began to discuss some point in bee-culture with his usual animation. Soon his gesticulating hand was doing quite a business, the bees became furious, and paid all their respects to me; and how many stings were pulled out of my face and head I cannot tell. As soon as this extracting work was over, I said: "Doctor Kirtland, I protest against all eloquence in the vicinity of bee-hives—especially when you are clad in proof armor, and I have none!" Although ever so well stung, the pain was soon over, and in a short time no visible proof remained that a bee had stung me.

In 1874, after the death of my son, my health became so much impaired that I sold all my bees. The next spring an entire change seemed to have come over me with respect to the bee-poison. I first noticed it in extracting some stings with the poison sac attached, for a friend who wished to procure the bee-poison in a perfectly pure state. I had noticed at the beginning of each year's work among my bees, that the poison affected me in various ways, and my wife would often have to awaken me when she heard me unconsciously moaning in my sleep. The night after pulling out these stings this moaning became so pronounced as to awaken the friends with whom I was staying, and alarmed them with the fear that I was dying. Intense dryness of the tongue and fauces accompanied sometimes by what seemed to be an aggravated form of heart-burn, smarting of the eyes, a heavy drooping sensation in the eyelids, breaking out fiery spots over various parts of my body, a disposition to almost tear the flesh of my cheeks, dreaming of the most excited kind, full of violent motion—these and many other symptoms were of frequent recurrence at the beginning of each bee-campaign.

After getting the medicinal bee-poison, as before recited, the effect upon me was so severe that I became really alarmed, and earnestly sought to protect myself against any recurrence of such unpleasant symptoms. I soon found that this was next to impossible. To converse with those fresh from handling bees—nay, even to receive letters or postal cards from them, was to be poisoned again.*

Ten years ago, being at my old home in Greenfield, Mass., I engaged to visit my friend Wm. W. Cary, of Coleraine, one Saturday afternoon, intending to preach to a congregation where for some years I had served as their pastor. The day was a charming one, and I was quite happy at the thought of meeting so many old friends. Mr. Cary had been handling

bees all day, and was well charged of course with the bee-poison. Almost as soon as he had shaken hands with me, my eyes began to smart, my eyelids to feel heavy, and my face to itch. My spirits sank at once, and the thought of preaching and seeing my old friends caused me only anxiety; in short, the very bottom of all hopefulness seemed to drop out, as it were, in a few moments. Explaining my reasons, I sought other quarters, but the pleasure of my visit was essentially spoiled. Imagination! I hear some one saying. Does imagination cause burning eruptions on the body, constant roaring in the ears as though near a waterfall! to say nothing of moaning in sleep, etc.?

From 1875 to 1881 I dreaded the return of each bee-season. My letters were all read by some member of my family, that I might handle none from bee-keepers. I felt that, let my general health be what it might, I could do nothing more with bees. While I could easily trace much of my suffering to the bee-poison, I could not believe that it was the cause of the head trouble from which I have suffered so much, for I was a frequent martyr to this many years before I kept bees. Now had I given my experience with the bee-poison from 1875 to 1881, I should have left the matter in such a shape as to prejudice many against having anything to do with bees. I should only have given the actual facts in my case, but for want of other facts not then duly weighed by me, my facts would have seemed to warrant inferences just the opposite from the truth.

In the spring of 1881 my health being more fully restored than for some years, it seemed to me almost an impossibility to keep longer away from the bees. A new thought suddenly occurred to me. Suppose a person after long use of tobacco or opium should give them up for some time—long enough for the effect they produce to pass away—and should then attempt to take the old, big dose! would he not be naturally alarmed at the result? May I not be mistaken then in supposing that any great change has taken place in my system, as respects the effects of the bee-poison upon it? and may not my painful experiences of the last six years be accounted for in another way? So long as I kept bees and dealt so largely in queens, I was compelled each year to inoculate my system so fully with their poison, that however severe the ordeal at first, I soon became indifferent to it. Now being under no such necessity, I stop short every time of full and repeated doses. Suppose that I take such doses again. With fear and trembling on the part of my family, but with scarcely any on my part, I determined to test the matter, for as even the presence of freshly extracted honey in the house, was enough to bring on another attack, I felt that I must get out of the world before I could escape from this dreaded poison. I determined, therefore, to make full proof of my new theory. Without any bee-hat, I helped my friends to extract their

*The Austrian who came over with Mr. S. B. Parsons' Italian bees, when stung, would leisurely take out of his pocket a vial to anoint the sting with his favorite remedy! Seeing how indifferent Mr. Cary, myself and others were to stings, he soon ceased to produce his vial.

*The susceptibility of some persons to the bee-poison, seems to be as great as that of others to the poison-ivy. I can handle this with impunity, while I have friends who cannot get near enough to it to see it, without being poisoned by it, if the wind blows to them from it!

honey, all the time saying to the bees, "Sting me as often as you please;" and as they were gentle Italians, I did not scruple by somewhat rough treatment, to make them do much more than they naturally wished to in the way of stinging. From the very first I did not suffer nearly as much as I had done every year since I ceased to work with bees! and little if any more than I had done every year when first handling them. In about a week I was again bee-proof, and launched out at once into a course of experiments (all in vain) to control if possible the impregnation of queens.

However, I describe the delight I felt in handling again the movable frames! In the apiary of a neighbor, Rev. McGregor, I fully proved that with small strips of foundation for guides, I could use my comb-guides, or guide-frames, and secure from Italian bees the same perfect worker-combs that I used to get with these guides from the black bees, thus realizing a favorite idea of one of our greatest bee-keepers, Doolittle, viz., getting perfect worker-combs with the least use of foundation.

While handling frame after frame of such combs, and feeling as much enthusiasm as I did in 1853, when I first saw that the bees would follow the triangular comb guide, I exclaimed to the Rev. McGregor (apologizing for the seeming play upon his name), I must make those words of Rob Roy in Scott's novel, my own: "My foot is upon my native heath—and my name is McGregor!"

Oxford, 9 Ohio.

For the American Bee Journal.

Bee-Keepers' Insurance, etc.

6—WM. DYKE, (44).

On page 444, Mr. Chas. Follett says that we ought to make the Bee-Keepers' Union an insurance company, too. With over eight years experience in fire and life insurance business, a portion of which was in examination of business at a general office, I must enter an objection to this "rider." We can organize for defense successfully, but if we undertake too much, I fear we will fail. Insurance of bees is not profitable to the company that insures it, and nearly all companies decline them entirely, how then can we as bee-keepers with no insurance experience, hope to make a success of it? No! let us confine ourselves to the emergency before us, and if we wish to organize a Bee-Keepers' Mutual Insurance Company, let it be a separate organization with separate management.

We are having a very peculiar season here this year; my bees have done finely, and were in excellent condition at the commencement of clover bloom, and a few colonies began storing in sections; but on June 15 the honey flow ceased, with 20 colonies in 32 sections each, and one in 64 (two tiers), and I got no more honey, though white clover has been in abundant bloom ever since, and we had frequent showers. This is a feature in modern

bee-keeping that I do not understand.

I have increased my apiary by 7 colonies, and returned quite a number of swarms, my increase being made by division. All my colonies (44) are crowded with bees, and by feeding I am getting lots of eggs and brood for our Spanish-needle crop which begins here about Aug. 20; this never fails us, and I think the bloom will be abundant from the outlook now, but what if it turns out as did the white clover? If it does, I will have more bees this fall than I will know what to do with.

Efingham, ♀ Ills., July 24, 1885.

For the American Bee Journal.

Eight or Ten Frame Hives?

JAMES HEDDON.

Under Query No. 96, "Critic" entertains the same opinions that were almost universal 15 years ago. I will endeavor to make my ideas upon this very important subject a little clearer.

If John Smith orders me to rear a queen for him, I have to go through a series of manipulations to get her hatched at will, and then when hatched, to be sold, I must supply her a hive and colony to remain in some days before and after fertilization before she is ready to be caged and mailed to Mr. Smith. All this, together with the labor of caging, stamping, mailing, advertising, etc., costs time and money; but when Nature induces a colony to rear a new queen, when the owner is asleep, then prompts the old queen to take most of the bees and go to a new hive, leaving behind a queenless colony or nucleus in which to perfect the new queen, how much does this new queen cost the owner? How much does a queen cost a man that never saw one? A man that says there is no such bee? A man who believes in "kings?" And yet just such men have been the recipients of more than 100 young, fertile queens per year. Is it not clear that the value of the *product* of this queen depends upon how much capital it has used *since* the queen evolved it? When one has (by accidental loss of colonies) on hand a lot of *idle* capital in the way of empty combs, eggs are of great value, not *per se*, but for the reason that they cause the idle, costly and valuable combs and hives to become active property.

I use the 8-frame Langstroth hive. Last spring one-half of the colonies of my home apiary were dead. I made my living queens do double service till I could rear new ones. When I was ready to divide a colony, I had brood in abundance for both colonies. Thus you see another point of advantage in having a reserve power in your queens. But this is not the greatest gain in the use of small hives.

I do not think that I have yet mentioned the principle connected with them, that caused Adam Grimm, T. F. Bingham, G. M. Doolittle, and many others to adopt small and smaller brood-chambers. I think that they found by carefully observing re-

sults from different colonies in different sized hives, that the colonies in the small hives paid them the largest dividend upon the capital and labor invested. I discovered this about 10 or 12 years ago, and changed from the 10 to the 8-frame Langstroth hives. I have never regretted it, but have always been glad of the change.

The one great point of success in the production of comb honey, is to keep the combs of the brood-chamber all as nearly full of brood and clear of honey as is practically possible. Not only that, but to have the *tops* of the brood-combs filled with brood. It is of vast importance that such a condition of the hive can be reached and maintained without constant attention and manipulation. Argue and theorize all we may, and yet the hive that will bring about the required conditions at the right time, with the least attention and manipulation, will be the hive of the future for all classes of honey-producers. Nothing can stop its adoption. The brood-chamber that holds but 8 Langstroth combs will much better accomplish these requirements than one with a greater capacity. It is better for wintering, as it holds the winter stores in a more compact form; (5 combs are better still). It is much easier to manipulate bodily.

"Critic" asks which we would rather take out of the hive at any time in the breeding season, "two dry combs or the queen." I unhesitatingly answer, the two dry combs; and as above stated, I did about 10 years ago take them out to stay; and on page 437 I have told how and why I remove 3 more at a certain time in the breeding-season. "Critic" says that he believes that the stronger a colony is, the more honey we get. I suppose, of course, that he means the more honey we get from that colony. I agree with him, as a rule, other things being equal. But that is not the proposition. The proposition with the specialist is this: Here is an unoccupied honey-area. I have some capital, physical strength, and knowledge of apiculture. Now, how, with what hive and system of management can I, with the least capital and labor, get the most surplus honey in the best marketable condition from this field?

With the bee-keeper operating in a field not fully stocked, the question is, with what hive and system of management can I realize the greatest dividend on the capital and labor invested and bestowed? It seems quite evident that "Critic" is not looking at apiculture in its broadest sense—the kind of bee-keeping that is going to supply the future markets. Considering durability and the kind of lumber needed, the cost of five 8-frame Langstroth hives, is not more than that of four 10-frame hives. The frames and combs number the same. I much prefer placing five, rather than four queens, with this capital. So placed, this extra queen will pay 10,000 per cent. on her cost in labor saved and comfort enjoyed.

For producing extracted honey, I much prefer the 8-frame hive for rea-

sons too numerous to add to this already lengthy article. The 10-frame Langstroth hive was once a standard; many have been the changes to both larger and smaller hives. Those that have enlarged their hives have returned; those that have contracted them have been pleased with their new position, and remained in it. This has been the rule, with but few exceptions.

Dowagiac, ♀ Mich.

For the American Bee Journal.

Grizzly Honey-Eater of California.

W. A. PRYAL.

Oft in our childhood days have we heard bear stories innumerable which made our slumbers of those days unpleasant ones. Though these animals

after gold cared not to come face to face. Not far from San Francisco there is a spot where a rancher thirty years ago was killed by one of these beasts. The place is not three miles from where I write, and is known as Grizzly Peak, and overlooks the State University building at Berkeley.

This reminds me of a young, tame grizzly bear that had such an attachment for its owner, who lived in one of the mining counties, that it would follow him where he went, and would moan in disappointment and distress whenever he took his rifle down for a hunting trip, and showed any signs of leaving it behind. On one occasion, when engaged in hunting, he shot at and wounded a large grizzly, and being unable to escape from his vengeance, was about falling a victim—his dog and the young bear set upon the enraged grizzly from behind,

prowling about the apiary in quest of bee-hives. Having a "sweet tooth" in his massive head which delights in smashing the waxen cells of the honey-comb and letting the luscious liquid trickle down his expansive throat, which, by the way, though it delights in quaffing nectar, still is about equally favorable to allowing some of the dainty morsels of the human body to descend the same route.

Some years ago I gave in these pages an account of the depredations of these monsters in some Los Angeles county bee-ranches, and how the owners laid in wait and treated the trespassers to a dose of cold lead. Some apiarists and stock-raisers, too, set poison for them, but when they can they prefer to practice with a rifle on them, and thus obtain a nice cut of bear steak. On this page is presented to the readers of the *BEE JOURNAL* a good illustration of one of these California grizzlies.

North Temescal, Cal.

For the American Bee Journal.

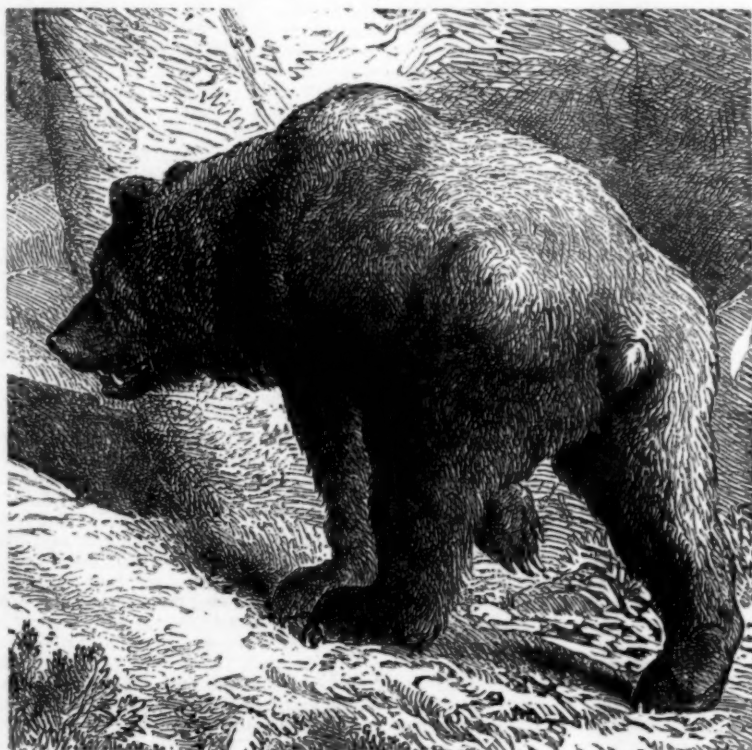
Discoveries in Cross-Fertilization.

CLARENCE M. WEED.

Few subjects are of more vital importance to bee-keepers just now, than that of the mutual relations of bees and flowers. Hence, some notes concerning the early history of the subject may be of interest, for if bee-keeping is to remain on a firm basis and not suffer from continual flings of fruit and flower growers, the public must be educated to a realization of the fact that bees do far more good than harm to the blossoms they visit; that to the flowers it is "a giving which is receiving," and that without such visitations many fruit-farms would be a failure.

Nearly one hundred years ago, a European naturalist, Christian Conrad Sprengel, while examining the blossoms of the wood crane's-bill (*Geranium sylvaticum*), a species nearly related to our common spotted crane's-bill (*G. maculatum*), discovered drops of honey hid below the inconspicuous hairs covering the lower portion of the petals. A little observation showed that this nectar could be easily reached by insects, but was so protected that rains could not wash it away. This led him to examine other flowers, and he discovered many similar instances, all of which he thought pointed to the conclusion that "the nectar of these flowers is secreted for the sake of insects, and is protected from rain in order that insects may get it pure and unspoiled."

For two years, from 1787 to 1789, Sprengel believed that the honey was secreted only for the benefit of insects; but in the latter years while studying the flower-structure of an iris, he found that there was no possible way in which the pollen of the stamens could reach and fertilize the pistils, unless some insect entered the blossom and brushed the pollen from the one to the other.



are becoming scarce, and bear stories are not told now as frequently as they were in the past, still the animals are to be found in some parts of the United States, and occasionally we read in the daily papers accounts of their depredations among the farmer's flocks and the bee-keeper's bees; and sometimes of causing the death of some persons who were suddenly surprised by coming upon them unprepared.

To the sturdy pioneers of the West these monarchs of the mountain fastness were a source of annoyance. Many are the ugly encounters, severe wounds, hair-breadth escapes, and often fatal results of those who penetrated the unknown fastness of the mountain regions of our new country.

In California the grizzly bear was a thing with which the early seekers

when he immediately turned to give them battle; in the meantime the hunter had regained his feet, got possession of his rifle, and from a shelter behind a tree, kept firing until the bear was killed, but not before his devoted animals were severely wounded.

To the farmer the grizzly has been, and in some localities is still, a depredator on his sheep and stock, and in a short while his flock is decimated greatly; and to the California apiarist his visits are not unknown. In the still hours of the night, when every thing is quiet, save now and anon the screech of an owl is heard about the trees by the brook, or the loud-voiced watch-dog down at the nearest neighbor barks at the moon, or at the approach of some unwelcome visitor, then his lordship comes stealthily

This was a "red-letter day" for Sprengel. Like a flood of light there burst upon him the idea that after all, the honey was secreted, not as a gratuitous gift for the special benefit of the insect world, but to attract insect visitors that the seeds of the flower might be fertilized, or, as some in these later days would say, pollenized—a term well worth using, as its meaning is clear and unmistakable.

This discovery gave a new impetus to Sprengel's studies, and he formed in it a plausible explanation of the forms of many flowers. For several years he continued his investigations, and in 1793 published his splendid work on "The Secret of Nature in the Form and Fertilization of Flowers Discovered."

But though Sprengel had done much to solve the question of the forms of flowers, the key-note remained unstruck. He saw only that insects aided in self-fertilization, and the great fundamental idea that unconsciously they carried the pollen from one flower to another, thus effecting cross-fertilization, and carrying out a great principle in Nature's economy, remained to be discovered.

A few years later Andrew Knight, another European botanist, after experimenting, stated that "in no plant does self-fertilization occur for an unlimited number of generations;" but not until the noted Chas. Darwin published his "Origin of Species," in 1859, did the great principle of cross-fertilization become fully understood. Thus the idea of the mutual beneficial relations of bees and flowers is of very recent origin—a fact which accounts in part, at least, for the vast amount of prejudice and ignorance now existing on the subject.

Chicago, 6 Ills.

For the American Bee Journal.

Apicultural Discussions, etc.

ABEL GRESH.

I would like to say a few words as to controversies carried on between noted bee-keepers. I dislike to see an advocate of the pollen "theory" stating premises that, if not utterly disproved, had at least reasonable doubt thrown upon them by an authoritative pen. Mr. G. M. Doolittle's experiments during the last severe winter were, no doubt, entered into honestly, and with a sincere desire to give a valued queen the best winter protection possible. After the bees died, Mr. Doolittle sent an honest sample of them to Prof. A. J. Cook, for critical examination, openly, and by the best authority known to our fraternity, who pronounced a portion of the bees as having died of diarrhea and showing no signs of pollen-grains in their intestines. In the face of all this I find that Mr. Heddon asserts, "No genuine bee-diarrhea can take place in a hive containing no pollen;" as if Mr. Doolittle and Prof. Cook were not on record to the contrary. True, the microscope of the Professor found small particles of pollen in the bottoms of some cells, and some dead

bees with pollen in their intestines, but how came those bees to have the disease, in which no pollen was found? I hope that Mr. Heddon will not gravely inform us that after the disease is once generated, it becomes contagious.

CONTRACTING HIVES.

Again, I find on page 437, in referring to "the contraction method," Mr. Heddon, at the close of his article, says: "I notice that others have been cotemporary with me in working out the advantages of contracting, but so far as I have read, I have not as yet seen it systematized, as a summer and winter management." The very first article read by me, in the BEE JOURNAL, some years ago, by Mr. G. M. Doolittle, treated of his method of contracting his hive in winter and expanding it in summer, which interested me so much that I at once became a subscriber to the BEE JOURNAL.

Now, while Mr. Heddon's system, as described by him, as a method of contracting his hive, is very interesting and instructive, and the advantages to be derived from such a method are at once apparent, still the closing sentence seems unjust. I am not a believer in the pollen theory, nor do I use the Heddon hive, yet I am very fond of following the discussions of the former, and the latter I believe to be a decided improvement on the 10-frame hives; my only criticism consists in a failure to "give honor to whom honor is due."

TOO MANY SWARMS.

I wintered 23 colonies on the summer stands last winter, and they came through all right, and I have increased them to 47. Prime swarms in June are swarming again now. I allow no second-swarms, and yet I do not see where this swarming will end. I do not want so many, yet what can I do about it? The weather is very warm, and if I put them back, they will lie on the alighting-board and sulk. Honey is coming in but moderately. I sometimes think that swarming could be bred out of them. My few hybrids seem the most inclined to swarm. I hived one swarm last week on full frames of foundation, and to-day they were out twice. I found that they had only partially drawn out the foundation, formed cavities for cells, had an egg in each cavity, and then were ready to go. I destroyed the eggs and cavities, but they still want to go. They were the first swarm in the spring, having come out on June 5, and rather a medium swarm. My best Italian colony did not swarm until yesterday; they had partly filled two crates besides 12 sections below. The swarm was large, and I gave them a third crate of 27 one-pound sections.

SYRIAN BEES, ETC.

Prof. Cook, in the ninth edition of "The Bee-Keepers' Guide," thought well of Syrian bees, so far as tested; no doubt many of the readers of the BEE JOURNAL would like to know his opinion of them now, and whether

his expectations of them were realized. Also, I would like to know whether he used sections in his hives $3\frac{1}{2} \times 5\frac{1}{4}$, and if so, how does he like them, and what does he think of them in general?

Weedville, Pa., July 21, 1885.

For the American Bee Journal.

Bees Beneficial to Crops, etc.

4—E. C. EAGLESFIELD, (100—119).

After reading all that has been written about the sheep-and-bee suit, I think it would be doing an injustice to Mr. Freeborn, and the fraternity in general, if I did not at once send my \$1.25 as a token of my appreciation of the situation in which Mr. F. is placed, and in which I or any other of the fraternity may be placed in the future. I hope every bee-keeper will consider this matter as they would were they in Mr. F's position, and act accordingly. Do not wait until you have sold your crop of honey, but *borrow* the money if necessary, and let us see in the next issue of the BEE JOURNAL a whole page of names of those who are willing to sustain the right.

I keep sheep, and bees, too, and can corroborate the statements made, that bees never molest them in the pasture if no more than five rods from the apiary. The only damage! that I know of my bees doing, is that done to my orchard; they have caused so much fruit to stick to the trees that they are breaking down. They look more like weeping-willows than apple trees.

People here who raise buckwheat are always complaining of bees injuring their crop, but they fail to give any evidence that it is so. I had a piece of buckwheat 10 rods from my 100 colonies, last fall, with 100 colonies more within $\frac{1}{4}$ of a mile, and if buckwheat was ever injured that ought to have been; but on the contrary it was an astonishing crop. A neighbor who helped me harvest it, counted upwards of 400 kernels from one stalk. I now have before me three stems which I saved last fall, and two of the stems are about an inch long, and one is $2\frac{1}{4}$ inches long. I will now shell the longest and see how many kernels it contains. Well, it has 67, and probably some had rattled off before. Now if any one doubts this I will mail them the two short branches as proof, as I always prove my assertions.

People who know nothing about bees have an idea that bee-keeping is a lazy but profitable business, and all the bee-man has to do is to put the boxes on and take them off; in the meantime to sit in the shade and see the bees do all the work. Yes, how they would like to keep bees if it were not for the stings!

A few words in regard to adulterating honey: Last fall, after selling 2,300 pounds of honey (mostly basswood), and having bought and fed for winter stores two barrels of coffee A sugar, I heard that it was being reported that I had fed my bees to make honey in sections, which costs

me about 2 cents per pound, and I was selling it at a shilling; but that report was soon dropped when I offered \$1,000 reward to any who would produce one ounce of such honey that I had sold, and I would give them the names of every person to whom I had sold honey, there being plenty of the honey yet unconsumed.

Poy Sippi, © Wis.

For the American Bee Journal.

The Prime Cause of Bee-Diarrhea.

W. H. STEWART.

On page 393, Mr. Heddon says that he must insist that I am mistaken in my conclusions as written on page 343, that long continued cold is the first cause of bee-diarrhea; and as proof that I am mistaken, he quotes Mr. Shuck's statement, that bee-diarrhea can be produced "in a few hours in summer, with the temperature about 60°, by feeding diluted honey or sugar syrup." Mr. H. says that he "knows that he (Mr. Shuck) speaks truly;" and further, "that this shows the error of Mr. Stewart, and the truth of the pollen theory."

Now Mr. Heddon will please understand that I was not writing anything about a disease that bees are subject to, or may be forced upon them in warm weather. I understand that all this long discussion on the "pollen theory" has had reference to the diarrhea that is so destructive to our bees in winter. I am aware that we may by artificial means, freeze our bees as solid as ice, even in midsummer; also that we may give them a temperature equal to midsummer, when the mercury stands at 40° below zero in the open air; but all such statements and mechanical experiments do not help us out of our winter troubles with bee-diarrhea. I would not mix up the discussion of a detached or isolated point by bringing in far-fetched side-issues. I hold that it is better to confine ourselves closely to the subject if we would solve a problem.

How can Mr. Heddon think that I am mistaken in concluding that cold long continued is the first cause of bee-diarrhea in winter? He teaches the same on page 214, for he there says: "My opinion is, that when the temperature falls below a given point, in the hive, the bees add to the heat-producing method of consumption of oxygenized food, that of producing heat by exercise, and this exercise necessitates waste of tissue, and this the consumption of tissue-making food—bee-bread."

Now, if Mr. Heddon is correct in his theory, that the consumption of pollen or bee-bread is the cause of bee-diarrhea in winter confinement, any sane man must see that he teaches us that cold caused the bees to make extra exertion, extra exertion caused the consumption of tissue, the consumption of tissue caused the demand for pollen or bee-bread; and according to his theory, the use of pollen as food caused bee-diarrhea, and diarrhea was the cause of bee-death. In

this chain of causes, is not cold the first link? Then, wherein am I mistaken?

But Mr. Heddon says on page 393, that "the pollen theory has to do with bee-diarrhea; not with bee-death." I have all the while understood that Mr. H., and his opponents, had been searching after the first link in this chain of causes, one link of which is bee-diarrhea, and the last link of which is bee-death, while in winter confinement. I think that Mr. Doolittle understands the matter the same. Now, Mr. H. cuts off the last link, bee-death, and it seems necessary, in order to keep the "pollen theory" good, to cut off all preceding links until he comes to the eating of pollen or bee-bread. If he would do thus, then why all this long discussion about first causes, prime causes, etc.? And again, why talk about "low temperature in the hive," waste of tissue, and extra exertion to produce more heat? These links have not to do with the "pollen theory," if bee-death has not.

I will admit that bee-diarrhea may be produced in summer by improper treatment, and also diarrhea in other animals the same. The same disease may be produced in the animal by various causes, and in many ways, and be the same disease every time; but that is not what we have been discussing. What we want to know is, what is the first cause, not what is an intermediate factor.

On page 214 Mr. Heddon says: "If pollen had not been a main factor in the cause of fecal accumulations in bees, the whole problem would long ago have been settled." Why did not Mr. H. say, if pollen had not been the main, or first, cause? I think that most of us are ready to admit that an over-eating of pollen or bee-bread may be an important factor in the cause or causes of bee-diarrhea in winter confinement; but that it is the cause, or first cause, is altogether another question.

I would thank Mr. Heddon and all others for what they can do to point out my real mistakes; truth is the only important lesson in all the ways of life. I am anxiously looking for Mr. Heddon's promised article on changing the winter stores of bees.

Orion, 9 Wis.

For the American Bee Journal.

Mr. D. A. Jones' Winter Report.

WM. F. CLARKE.

What with moving and other hindrances, I have been able to write very little for the press of late, but I have read the bee-periodicals pretty closely, and have been surprised that Mr. D. A. Jones' winter report has, apparently, provoked no criticism. It is to me a very astounding report, and "I want to know, you know," a little more about it. The success recorded in wintering bees during a winter of extreme severity is unparalleled. While such men as A. I. Root, Heddon, Hutchinson, Doolittle, and a host more that might be named, are still

wrestling with the winter problem, our great Canadian apiarist seems to find it no problem at all. To him, wintering bees is "as easy as rolling off a log."

The report in question abounds in "glittering generalities," and is a grand exhibition of apicultural pyrotechnics. One is fairly dazed with wonderment, and dazzled well nigh to blindness with the brilliant results of a skill or luck in bee-management, never before attained in the annals of apiculture. Let us quit our discussions about the pollen, hibernation, and other theories. Mr. Jones has often told us that he has no bee-keeping secrets. He is ready and willing to tell every thing he knows. In the name of all the fraternity of bee-keepers who are trying their best to solve the winter difficulty, I call upon Mr. Jones to "rise and explain" how he has managed to winter his myriads of bees with a loss so trifling as hardly to be worth mentioning.

Mr. Jones does not tell us in exact figures how many colonies he put into winter quarters, nor precisely how many he lost, but "putting that and that together," the following are the conclusions at which I have arrived: First, as to the number of colonies wintered over: A home apiary of about 400 colonies is mentioned; "one of our bee-farms where we had about 250 colonies" is referred to; several clamps are spoken of, some of them holding from 80 to 90 colonies, and one smaller one, 50; besides an indefinite number of colonies in double-walled or chaff-packed hives. Adding these together without exaggerating, we reach the following sum total:

Home apiary.....	400
"One of our bee-farms".....	250
This implies at least another bee-farm, say.....	200
Several clamps would mean at least 3, say	
two of 80 and one of 90.....	250
A smaller clamp of.....	50
Miscellaneous single hives, double-walled or	
chaff-packed, say.....	20
Total number of colonies.....	1,170

Now as to the losses: At the home apiary, consisting of about 400 colonies, there appear to have been no losses whatever, only some queenless colonies, but even these were "strong in bees." One of the clamps containing about 50 colonies "was stronger apparently than when put out in the fall"—"bees in extra fine condition." Again, "those wintered in-doors varied at the different apiaries, some slightly better than others, but all in fine condition." There were "some colonies, placed in winter quarters," which are described as having been "too weak in bees to keep up the temperature necessary to successful wintering, either in-doors or out. A few of these succumbed." How many is a "few" of "some?"

Next we have a rather longer statement: "At one of our bee-farms where we had about 250 colonies, part were packed in clamps, and part in-doors; one of those packed in the bee-house died from starvation, the rest we put out in much finer condition than it has been our pleasure to have them for a long time. Those packed in clamps were in about equally as fine condition, but several were found

to be queenless, and 2 colonies at one end of the clasp, where the rain had wet the packing, died from that cause, we suppose, as the packing was frozen solid to the hives." A degree of carelessness is confessed here, and it is added, "we paid the penalty in the loss of two colonies." A terrible "penalty" indeed! The clasp contained "part" of 250 colonies—perhaps half the number, or say 100, which would be a loss of 2 per cent. Summing up, we arrive at the following "leetle" total: A "few" of "some," call "some" 20, and a "few" 5 colonies; from "starvation" in bee-house, 1; frozen rain in clasp, 2; total, 8.

The queenless colonies that were "strong in bees" cannot be counted in with losses. A few queens ordered from the South would make them all right. Out of 1,170 colonies, I am only able to make out 8 lost—about $\frac{3}{4}$ per cent. This is marvellous! magnificent!! glorious!!! What better can we desire than this? Truly the millennium of bee-keeping has been reached in Beeton, Ont. Old Boreas is conquered, slain outright. Again I say, what is the use of pestering ourselves about pollen, hibernation, or any other theories, in view of such a result as this? We have only to take our places as meek disciples at Mr. Jones' feet, and let him teach us how to do it.

Guelph, Ont.

P. S. Having read and pondered Mr. Jones' report once more since the foregoing was written, I am inclined to think I have underestimated the number of colonies he put into winter quarters, and over-estimated his losses. What he says, in plain figures, and equally plain statements, would imply, it seems to me, fully 1,500 colonies when winter set in. Five is a rather large figure for a "few" of "some." Three or four would probably be nearer the mark. Thus the winter loss would barely reach a half per cent. "*Mirabile dictu!*" But, observe, I do not say, "*Incredibile dictu!*" W. F. C.

For the American Bee Journal.

Apis Americana, etc.

G. J. MOLONEY.

Prof. Fowler, the noted phrenologist, advises a union of opposite temperaments and blood for the benefit of the physical constitution of posterity; those with large perception with those deficient in reflective organs, and *vice versa*, are advised to select partners for life among those who are well developed where they are weak, in the above named mentalities. "*Apis Americana*" may, perhaps, be developed exactly in the same manner as advised by the phrenologist in producing a superior race of bipeds.

For instance, did the Italian bees possess the quickness of the German bees in ascending to the surplus boxes, and their comb-honey-producing properties; and did the Germans

have the longer proboscis and gentleness of the Italians, we would, no doubt, to-day, have "the coming bee." These desirable qualities can only be produced by crossing.

Prof. Cook, our greatest apicultural authority, says that there is no objection to cross-breeding bees, as is frequently done in cross-breeding cattle, sheep and horses; and that "by judicious crossing and careful selection we shall surely reach such results that shall be to the bee of the day, what the sleek short-horn is to the lean Texan kind of the Western plains." Some, however, claim that hybrids deteriorate, and that they are inferior to either race in their purity. As well might we say that the pointer dog, the race-horse, the game and Plymouth Rock fowls, and also the English and American people, which are emphatically crosses, have deteriorated. There are, no doubt, "catch hybrids" bred by carelessness and accident having those inferior qualities.

The clarion note by Mr. Heddon, summoning bee-keepers to the defense of Mr. Freeborn, should at once be answered favorably from all quarters. The age of chivalry is not yet gone, nor will the glory of bee-keeping be extinguished. Self-interest is the lever that moves the world, and bee-keepers seem to be imbued with something of the spirit of their little pets—peaceable if not disturbed, but capable of defense when attacked.

Ocequeo, & Mich.

The National Bee-Keepers' Union.

CONSTITUTION.

ARTICLE I.—This organization shall be known as the "National Bee-Keepers' Union," and shall meet annually, or as often as necessity may require.

ARTICLE II.—Its object shall be to protect the interests of bee-keepers, and to defend their rights.

ARTICLE III.—The officers of this Union shall consist of a President, five Vice-Presidents, and a General Manager (who shall also be the Secretary and Treasurer), whose duties shall be those usually performed by such officers. They shall be elected by ballot, and hold their several offices for one year or until their successors are elected and installed; blank ballots for this purpose to be mailed to every member by the General Manager.

ARTICLE IV.—The officers shall constitute an Advisory Board, which shall determine what action shall be taken by this Union, upon the application of any bee-keepers for defense, and cause such extra assessments to be made upon all the members as may become necessary for their defense.

ARTICLE V.—Any person may become a member by paying to the General Manager an Entrance Fee of ONE DOLLAR to the Defense Fund, and an annual fee of 25 cents, for which he shall receive a printed receipt making him a member of this Union, entitled to all its rights and benefits. The annual fee shall be due on the first day of July in each year, and must be paid within 30 days in order to retain membership in this Union.

ARTICLE VI.—Donations of any amount may be made at any time to the Defense Fund, in addition to the entrance and membership fees and the regular assess-

ments made upon the members by the Advisory Board.

ARTICLE VII.—The Defense Fund shall be used for no other purpose than to defend and protect bee-keepers in their rights, after such cases are approved by the Advisory Board, and shall only be subjected to Drafts regularly made in writing by the Advisory Board.

ARTICLE VIII.—The annual fees paid by the members shall become a general fund, from which shall be paid the legitimate expenses of this Union, such as printing, postage, clerk-hire, etc.

ARTICLE IX.—Meetings of this Union shall be held at such times and places as shall be designated by the Advisory Board, or upon the written requisition of ten members.

ARTICLE X.—This constitution may be amended by a majority vote of all the members at any time.

LIST OF MEMBERS AT THIS DATE:

Addenbrooke, W.	King, T. Frank
Allen, Ransom	Langstroth, Rev. L. L.
Anderson, J. Lee	Le Roy, J. W.
Anderson, Wm.	Ludkey, Charles
Angell, C. S.	Ludloff, K.
Baldwin, B. T.	Maddox, W. T.
Barnes, Wm. M.	Mallory, S. H.
Baxter, E. J.	Marden, Henry
Bernscheide, Ernst	Margrave, J. W.
Besse, H. M. D.	Mason, Jas. B.
Bitzer, Wm.	Mattson, Jas.
Bohn, Gustav	McConnell, James
Bray, Moses	McCormick, Emery
Brickey, Peter	McNay, Frank
Buchanan, J. W. & Bro.	McNeill, James
Burrell, H. D.	Millard, D.
Burton, L.	Miller, R. T. & Co.
Carder, A.	Miller, Dr. C. C.
Chapman, J.	Miller, Henry
Cheney, H. H.	Mills, L. D.
Clarke, Rev. W. F.	Minnich, F.
Connley, John T.	Minor, N. L.
Cook, Prof. A. J.	Muth-Rasmussen, Wm.
Cripe, Henry	Nelson, James A.
Dadant, Chas.	Newman, Alfred H.
Dadant, C. P.	Newman, S. M.
Darby, M. E.	Newman, Thomas G.
Dayton, C. W.	Nipe, James
Decker, A. A.	Pennoyer, L. A.
Demaree, G. W.	Peters, Geo. B.
Dibbern, C. B. & Son	Phelps, N. T.
Dickason, T. B.	Pond, Jr., J. B.
Dittmer, Gus	Powell, E. W.
Dodge, U. E.	Pray, G. L.
Doolittle, G. M.	Rainey, Jarvis
Dowse, Robert	Rey, John
Drane, E.	Reynolds, M. G.
Dunham, P.	Rook, A. I.
Dunn, John	Rowe, David
Eaglesfield, E. C.	Royce, Burr
Eastwood, L.	Schaper, E. F.
Elwood, Sr., W. R.	Scheuring, Paul
Feathers, Harvey	Secor, Eugene
Flanagan, E. T.	Shapley, D. H.
England, F. J.	Shearman, J. O.
Follett, Charles	Shirley, W. H.
Forbes, W. E.	Smith, George
France, E. & Son	Spady, Jno.
Freeborn, S. L.	Spencer, M. L.
Fulton, W. K.	Stearns, J. R.
Fant, H. W.	Stephenson, G. W.
Farness, Dwight	Stephens, W. B.
Gander, A. M.	Stewart, W. H.
Green, Charles H.	Stoller, Wm.
Greening, C. F.	Storey, E. M.
Gresh, Abel	Talbert, M.
Grimm, Christopher	Thatcher, Will
Harlens, J. G.	Theilmann, G.
Hatch, C. A.	Thompson, Geo. M.
Havens, Reuben	Tinker, Dr. G. L.
Hayhurst, E. M.	Tongue, L. N.
Heston, J. N.	Travis, F. W.
Heddon, James	Travis, I. A.
Hensley, J. P.	Trimmer, John
Hettl, M.	Turner, T. E.
Hill, A. G.	Tyner, Alonzo
Hills, Mrs. H.	Vanhouten, C. W.
Hilton, George E.	Vialon, P. L.
Hoke, Abe	Walton, Col. R.
Hollingsworth, C. M.	Webster, H. S.
Howard, J. B.	Whitney, W. V.
Hoyle, George H.	Wichers, A.
Huse, Wm. H.	Wilkins, Miss Lucy A.
Hutchinson, W. Z.	Wolcott, Wm. C.
Hyne, James M.	Wright, W. D.
Jones, George W.	Zwiener, H. L.
King, D. N.	

All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are as follows:

For 50 colonies (120 pages).....	\$1 00
" 100 colonies (220 pages).....	1 25
" 200 colonies (420 pages).....	1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

SELECTIONS FROM OUR LETTER BOX

Excessive Swarming.—Dr. J. C. Thom, Streetsville, Ont., on July 24, 1885, says:

My bees have swarmed excessively. Honey-gathering has been only medium so far, and basswood is just out. The weather is hot, and perhaps we will yet obtain some surplus honey here.

"All's Well that Ends Well."—J. W. Margrave, Hiawatha, ♂ Kans., on July 27, 1885, writes:

I have had only a trifle of honey so far. I saved only one queen and about a teaspoonful of bees out of my 53 colonies that I put away last fall. I obtained 14 one-frame nuclei and one pound of bees, and a tested queen, and I now have 30 colonies in pretty good condition for the August honey-flow (if we get it), and I hope for the best. One gain we can boast of in losing our bees all around us is, we have gotten pretty much clear of black bees, which we were trying to do.

Basswood Almost a Failure.—I. A. Travis, Lyons, ♂ Wis., on July 27, 1885, says:

I have taken a deep interest in the National Bee-Keepers' Union ever since it first started, and I send \$1.25, the amount due from me, and what I consider due from every bee-keeper in the United States. Fellow bee-keepers, let us rally at once and make up a large list, bearing in mind that it is only the strongest colonies that gather the greatest amount. The honey season is nearly closed, with but a small yield of honey. White clover did not seem to have much nectar in it, and basswood is almost a failure.

Value of Sweet Clover for Bees.—Reuben Havens, Onarga, ♂ Ills., on July 21, 1885, says:

I have just looked over the list of names of the members of the Bee-Keepers' Union—less than 100 names! when there should be 1,000. Come, fellow-bee-keepers, let us "be up and doing!" say but little, but be ready for action. The white clover harvest is nearly closed, with but a moderate supply of surplus. Bees are in fine condition, and are now working finely on sweet clover, of which I have but one acre. O, for ten acres of it! It would put \$200 into my purse. Sweet clover and catnip would pay a big profit for the expense of cultivation. There are large quantities of catnip along the hedges here, and the bees are working freely on it.

Honey and Wool.—Rev. W. F. Clarke, Guelph, Ont., writes:

I am in entire sympathy with the Bee-Keepers' Union. Tennyson said in his ode in honor of Mrs. Wales: "We are all Dane in our welcome of thee!" So we are all American in our sympathy with the persecuted Wisconsin bee-keeper. It is a most insane suit, and must ultimately end in failure, but a bold, united front must be presented to the enemy. It is, as all doubtless know, a popular saying in England, that "where there is the best honey, there is the best wool." Is this going to be reversed in the United States? I trow not; not if we know ourselves, and we think we do. The proverb is a true one.

Very Satisfactory Season.—H. R. Boardman, East Townsend, ♂ Ohio, on July 27, 1885, says:

The honey season, which closed about July 20, has been very satisfactory here. The yield of honey has been very good and of most excellent quality. Bees have swarmed more than usual. Basswood has been the principal source of surplus; it has been the best I ever knew. I have practiced the plan, in part, advocated by Mr. Hutchinson—hiving swarms upon empty frames on the old stand, and it has been quite satisfactory. I have also used natural comb starters in the sections with good results.

"Driving Bees," etc.—J. H. Andre, Lockwood, ♀ N. Y., writes:

I think that in a good season "driven" bees will store enough honey to winter on if "driven" late in July, and if foundation is used; that is, in some localities where buckwheat is sown. I notice that some think my theory in regard to the sheep-and-bees suit is a fallacy, while others corroborate my opinion. What is wanted is old, reliable bee-hunters—not bee-keepers—to show up the fallacious idea of proving that they were Mr. Freeborn's bees. How would it look to compel a man to pay damage for his tame crow pulling corn one mile away, over a piece of woods (when there might be a dozen nests of wild ones in the woods), because his crow went that way. I send a clipping taken from the "Rural Home," Rochester, N. Y., and it is a part of an article that I sent to the BEE JOURNAL a few weeks ago. It seems to me they ought to give credit to the paper in which it appeared originally, if not to the writer.

[It is getting to be a very common thing for agricultural papers to copy articles without giving credit—hardly a day passes without giving some evidence of this. We lately noticed a whole column article written by us and published last December in the BEE JOURNAL, copied into an agricultural paper without credit. We are always glad to have articles copied, but due credit should always be given.—Ed.]

That Foolish and Malicious Lawsuit.—Wm. C. Wolcott, Eldorado Mills, ♂ Wis., writes:

I send 25 cents as my fee to join the National Bee-Keepers' Union, and \$1 for the purpose of defending the interest of bee-keepers against such foolish and malicious lawsuits as the one brought against Mr. Freeborn for his bees attacking his neighbor's sheep. If that is a fact, he must have a different race of bees than any other bee-keeper that I ever heard of. If more is needed to defend such suits, I am willing to pay my share.

Wintering Bees on Natural Stores.—R. A. Morgan, Columbus, ♂ Wis., on July 23, 1885, writes:

In regard to Mr. Heddon's letter, on page 443, in reference to wintering bees on natural stores without excrement after long confinement, I would say that in the fall of 1881 I put 250 colonies of bees into three cellars, and took them out on April 5, 1882, after a confinement of 141 days, and they flew as freely and as easily as they did on the day they were put in; and there was no excrement that was visible even on newly-painted boards. Their stores were strictly white clover honey, gathered in a prairie country. This is a statement of the facts as nearly as I could

perceive them. There was a dust on the bottoms of the hives which I supposed to be the pieces of old comb which had been cut away for breeding purposes. Contrary to the common theories I have always found that the colonies which bred most, wintered the best; and that a low degree of temperature is the cause of all wintering troubles. The most of the bee-men in fighting against cold, defeat their own cause.

Fertilizing Queens, etc.—J. L. Pinkerton, Lebanon, ♂ Mo., on July 23, 1885, says:

The honey season has been one of the poorest on record in this section. Bees have done nothing in the section-boxes yet. They are now beginning to come in laden, being at work on the white sumac, and as there is considerable white clover yet, we hope to get some honey. A friend of mine had a colony that became queenless in the spring; he obtained a frame of brood and eggs from a neighbor, and gave it to them, when they immediately uncapped the brood and stuck their heads foremost into cells in the adjoining combs. What was the cause of this? I never knew of such a case. Another friend has heard of the plan of fertilizing queens while in the larval state, by means of drone-larvæ, and has been asking me about it. Will any correspondent enlighten us through the columns of the BEE JOURNAL?

Poisoning Bees.—Moses Bray, New Almaden, ♂ Calif., on July 17, 1885, writes:

Although I will not have a pound of honey to handle from the 1885 crop, yet I cannot afford to ignore the Bee-Keepers' Union, as I do not know how soon I may be in jeopardy. I would suggest that the idea of making a party prove by marks on the bees, etc., be dropped. If a party poison my bees, I would not like to be asked to prove by marks that they were my bees. A lady but a few miles from my apiary was guilty of poisoning bees last season near my place. They were trespassing on her grapes. She said that it was a decided success, and one could see the bees lying dead on the ground. An act of this kind should be considered a misdemeanor, without stopping to find out whose bees had been poisoned, and punished accordingly.

Methods of Managing Bees, etc.—D. L. Shapley, Randallsville, ♂ N. Y., on July 18, 1885, says:

If each one who writes for the BEE JOURNAL would give a carefully prepared statement as to how they manage with their bees both during summer and in winter, I think it would be a great help to any one just starting in the business; also to old bee-keepers, for the way one does in one locality might prove destructive in another. I think this would give information so that one could tell what would be best in that locality in which he might wish to start an apiary. I have lost only 3 colonies since I commenced, three years ago—one through carelessness and ignorance, one by queenlessness, and one was robbed. I do not know whether it is my good luck or what, but it seems strange to me that so many lose heavily, and I, a beginner, not having lost any to speak of. I had 20 colonies to commence with last spring, and all have swarmed except one; they are just beginning to get honey from basswood. The white clover harvest was very light, as there was only three or four days that bees could work on it; but everything previous to that yielded bountifully, and we are expecting a heavy crop from basswood, if the weather is favorable.

Replacing Worn-Out Queens.—L. L. Triem, Laporte City, © Iowa, on July 21, 1885, says:

I form 2-frame nuclei by placing the hive containing these close beside the colony containing the worn-out queen, the entrances of both hives facing in the same direction. Immediately after the close of the white honey season, I take away all the combs from the hive containing the old queen, and give them to the nuclei; the old bees may be used up by giving them one comb of honey and filling the balance of the hive with wired frames of foundation. The combs should be stored away for the next season's use. By this plan no good young queen need be lost, which is of importance. This plan has its faults, however, as have other plans.

Bees Have Done Well.—Wilson Sherman, Chester Center, © Iowa, on July 24, 1885, writes:

My bees have done well so far this season. Over half of them have produced over 100 pounds per colony. White clover has been a good crop in this section; it is about done blossoming for this season. The bees are working lively on buckwheat at present. I think there will be a good honey-yield here this fall, for there have been large rains every 24 hours for about a week. I have increased 8 colonies to 23; one colony swarmed 5 times, and they were large swarms, too. I have used the Heddon plan of preventing after-swarms, on half of my colonies, and it has been a perfect success. I am intending to take all the natural stores away from my bees this fall, and feed them sugar syrup, as I think that pollen is the cause of our winter losses.

Queen Going to Another Hive.—Robert Corbett, Manhattan, © Kans., writes:

I had taken a black or hybrid queen and started a nucleus for the sake of preserving her for a little while. The weather being cool, I was obliged to feed her a little. In the meantime I had taken an Italian queen from a strong colony that was about 20 feet away from the nucleus (I think for two days I had neglected feeding or supplying her with the necessary food; be that as it may, I do not know), and when the time arrived that I expected queen-cells to be well developed, I proceeded to open the hive, and to my astonishment I found the black queen in the Italian colony, working with a will. But then, how did she know the colony was queenless? That is where the instinct comes in.

Good Season for Increase and Honey.—Abe Hoke, Union City, © Ind., on July 27, 1885, says:

I put into winter quarters 25 colonies in good condition, and well protected as follows: Fourteen in double-walled brick hives with 6 to 8 inches of dry sawdust on top of this, and of those I lost 8. I had 5 colonies in wooden hives packed all around with dry sawdust, and of these I lost 3. I had 6 in straw hives, and of these I lost none, and they were packed as above. The season up to this time has been pretty good for increase, and also for honey—the best for years—but to-day the bees are looking up honey without going to the fields—not a good sign for much more honey. I have taken about 400 pounds of honey in two-pound sections. There is no sale here for extracted honey. More than one-half of the bees in this section went to sleep last winter and forgot to wake up. My loss was 11 out of 25. I now have 29, having sold 6.

Good Fall Crop Expected.—J. W. Clark, Clarksburg, © Mo., on July 18, 1885, says:

Basswood and clover have given only a small crop of honey, on account of there being too much rain. The pastures were white with clover, and the bees are still working on them some, but they get very little honey, as shown by a colony on scales. Bees are driving out the drones and robbers. They are also working on catnip, mustard, and horse-mint now. Carpenter's-square and buck-bushes are beginning to open; prospects are good for the fall or yellow flowers.

Button-Ball Bush.—G. W. Ashby, Valley Station, © Ky., sends specimens of a flower and writes thus:

I send some blossoms that grew on a small bush that the bees seem to be very fond of. I have seen nothing said about it in any of the books enumerating the honey-plants—at least no description by which I can identify it. It seems to be a bush filling a vacancy or dearth of honey-secreting plants in July. I send a ripe flower, or one commencing to wilt, one in full bloom, and one not yet open, with its honey-secreting tubes. It grows along the margin of ponds and places that dry up in summer. Please give its name and value as a honey-plant.

[This is the button-ball bush (*Cephalanthus occidentalis*). The flowers have a considerable quantity of nectar, but the noted family to which the species belongs (*Madder* family) is not celebrated in this particular. The coffee-tree belongs to the same order.—T. J. BURRILL.]

Bees and Buckwheat, etc.—Geo. Duffy, Austin, © Minn., writes:

I have read some in regard to the suit about bees doing damage to sheep. This seems even more absurd than the idea that bees damage buckwheat or fruit of any kind while in blossom, and this, I think, is the most unreasonable of all unreasonableness. My experience in raising crops of buckwheat is, that I have harvested and threshed just as great a quantity, and just as good a quality (all other things being equal), in proportion to the amount of ground sown, from crops that they have worked on, and that was literally alive with them while in blossom, as I have from crops on which I never saw a honey-bee. The same is true in my experience with small fruit, plums, apples, etc. My opinion is that such a case as the Powers-Freeborn, will never be tried in any court of equity in this free country; if it is not withdrawn, it surely will be dismissed. There can be no cause of action; for as Mr. G. M. Doolittle truthfully says on page 405, to furnish the required proof of whose bees did the damage foolishly claimed to have been done, seems utterly impossible. However, if such a case is carried on (as they say wonders will never cease), I would not like to be counted out as one not willing to contribute the \$1.25 to such a cause.

Basswood and Whitewood.—K. O. asks for information as follows:

For a number of years I have tried to raise basswood trees from the seed, but I signally failed each time. I once sent away for some whitewood seed, and instructions came, but no seed at all. It may be cheaper to buy the trees, but there is great satisfaction to plant the seed one's self. Will some one who has had experience in raising these trees, please inform me how to save and grow the seed from these two varieties of trees?

Consumers Instead of Producers.—A. S. Goodrich, Worthington, © Ohio, on July 28, 1885, says:

The honey season is a failure here, there being no surplus. My bees were very weak last spring, but I had them built up just in time to be consumers instead of producers.

The "Busy Bee."—David Rice, Lebanon, © Oreg., on July 22, 1882, says:

This season is like the last, there being a poor honey yield. Quite an interest has sprung up, in this vicinity, in the interest of the "busy bee."

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 10 a. m., Aug. 3, 1885.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—This week has brought on the market some of the new crop, which is being held at 15c. per lb. for white comb. There is not any comb honey of the crop of 1884 worth mentioning here now. Extracted offerings are rather free; prices are unchanged—56½c. per lb.
BEESWAX.—22c. for yellow.
R. A. BURNETT, 161 South Water St.

BOSTON.

HONEY.—We quote the following prices: Fancy white comb in 1-lb. sections, 12@13c.; the same in 2-lb. sections, 14@15c.; fancy white California 2-lb., 12@14c. Extracted weak, 6@8c. Sales very slow.
BEESWAX.—30 cts. per lb.
BLAKE & HIPLEY, 57 Chatham Street.

NEW YORK.

HONEY.—The honey market is very quiet, and will continue so until fall trade opens up. Some old stock is on the market yet, with small shipments of new comb honey arriving. Southern extracted honey is coming in very freely. Quotations are as follows for comb honey: Fancy white in 1-lb. sections, 14@15c.; fair to good in 1-lb. sections, 12@13c.; fancy white in 2-lb. sections, 13@14c.; fair to good in 2-lb. sections, 11@12c.; fancy buckwheat in 1-lb. sections, 9@10c.; fancy buckwheat in 2-lb. sections, 7@8c. Extracted white clover, 6@7c.; buckwheat, 5@6c.; Southern, per gallon, 55@65c.
BEESWAX.—Prime yellow, 25@28c.
MCCAUL & HILDRETH BROS., 34 Hudson St.

CINCINNATI.

HONEY.—The market is quiet with fair demand for extracted, and an abundance of offerings from commission houses and producers. Prices range between 4@8c. on arrival. There is but little new comb honey in the market, with an occasional demand. Prices nominal.
BEESWAX.—Is in fair demand with liberal offerings, and brings 24@24c. on arrival.
C. F. MUTH, Freeman & Central Ave.

SAN FRANCISCO.

HONEY.—The market is quiet, there being no shipping demand and not much local trade. There are receipts of both old and new. One lot of 200 cases of old extracted arrived from San Jose. White to extra white comb, 7@9c.; dark to good, 4@6c.; extracted, choice to extra white, 4½@5½c.; amber colored, 4@4½c.
BEESWAX.—Quotable at 24@25c.—wholesale.
O. B. SMITH & Co., 423 Front Street.

CLEVELAND.

HONEY.—Is very dull just now during strawberry time, and although we hold at 14@15c. per lb. best white 1-lb. sections, it is merely nominal, as there are no transactions. As soon as our people have satisfied their craving for acid fruits, they take with confidence to a good demand in July, August and September.
BEESWAX.—Scarce at 28@30.
A. C. KENDAL, 115 Ontario Street.

KANSAS CITY.

HONEY.—No change in prices to note. Shippers and buyers both holding off, with some concessions in favor of buyers. Notwithstanding the short crop reported in California, sales are still being made there at about the same prices as in the spring, and some new honey is quoted there at 4c. for extracted. We quote choice white 2-lb. sections comb at 12c.; 1-lb., 13@14c. Extracted, 56½c.
BEESWAX.—Weak at 20@25c.
CLEMONS, CLOON & Co., cor. 4th & Walnut.

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OF THE

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ALFRED H. NEWMAN,
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A copy of "Col. J. B. Clark's Grand Triumphal March," is on our desk. It is arranged for the piano by J. T. Warnelink, and is published by H. T. Knake, Pittsburgh, Pa. Price, 40 cents.

If your wrapper-label reads Aug. 85, please remember that your subscription runs out with this month. Renew at once, so as not to lose any numbers.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Students' Songs is the title of a book on our desk. It is edited and compiled by Wm. H. Hills, a young Harvard graduate, and is published by Moses King, at Harvard Square, in Cambridge, Mass. Price, 50 cents.

For two subscribers for the Weekly BEE JOURNAL (or 8 for the Monthly) for one year, we will present a Pocket Dictionary, and send it by mail, postpaid.

Local Convention Directory.

1885. Time and place of Meeting.
Aug. 12-14.—Cedar Valley, at Waterloo, Iowa.
A. D. Bennett, Sec.
Aug. 25.—N. W. Ill. and S. W. Wis. at Rock City, Ill.
J. Stewart, Sec., Rock City, Ills.
Sept. 1, 2.—W. N. Y. and N. Pa., at Salamanca, N. Y.
A. D. Jacobs, Sec., Jamestown, N. Y.
Dec. 8-10.—Michigan State, at Detroit, Mich.
H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

A NEW BEE-VEIL.

There are five cross bars united by a rivet through their center at the top. These bars are buttoned on to studs on the neck-band. The bars are of best light spring steel; the neck-band of best hard spring brass; the cover is of handsome light material. It is very easily put together, no trouble to put on or take off, and folds compactly in a paper box 6x7 inches by one inch deep. There would be no discomfort in wearing it either day or night, and the protection against Mosquitoes, Flies, Bees, Gnats, etc., is perfect. The weight of the entire Veil being only five ounces. Price, by Mail or Express, \$1.00.

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BCtf Watertown, Wis., Mar. 1, 1885.

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Untested Queens.....	each	\$ 1 00
" " " " " " " "	1/2 doz.	5 50
" " " " " " " "	1	10 00
Warranted " " " " " " " "	each	1 10
" " " " " " " "	1/2 doz.	6 00
" " " " " " " "	1	11 00
Tested " " " " " " " "	each	2 00
Selected Tested Queens.....	"	2 50

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The fields are droid with unfading prime;
From the bleak pole no winds inclement blow,
Mould the round hail or flake the fleecy snow;
But from the breezy deep the bleas'd inhale,
The fragrant murmurs of the western gale."
—Homer.

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1882.

1885.

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6 " " " " " " " "	5 00
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My nuclei colonies are in a complete little nucleus hive with 4 frames, so constructed that by removing their outer top-bars, two of them perfectly fit a standard L. frame on the inside. They are in first-class condition, well stocked with Brood and Bees, and will be sent promptly at the following

LOW PRICES:

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12 " " " " " " " "	40 00
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6 Nuclei, " " " " " " " "	16 00
12 " " " " " " " "	30 00

Take your choice between Pure Italians and my own strain of bees.

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